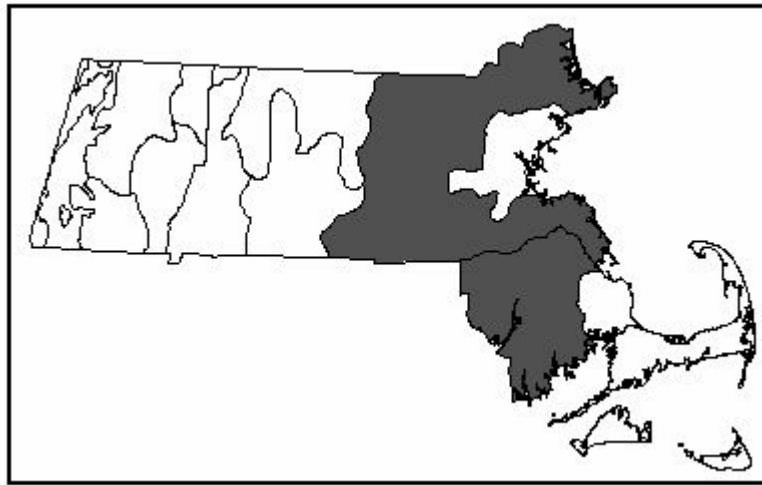


Community Name: ALLUVIAL ATLANTIC WHITE CEDAR SWAMP
Community ELCODE: CP1B1A4000
SRANK: S2



- Concept:** Forested swamps occurring along low-gradient rivers where Atlantic white cedar is co-dominant with red maple in the overstory.
- Environmental setting:** Alluvial AWC swamps differ from other AWC wetlands in that they occur within the floodplain of rivers and streams or at the fringes of open marshy areas along ponds. They receive annual or semi-annual overbank flooding making them more mineral-rich than other AWC wetlands. As with all AWC swamps, water-saturated peat, generally about 1 m thick in alluvial examples, overlies the mineral sediments, and standing water generally occurs for half of the growing season or longer.
- Vegetation Description:** Alluvial AWC swamps are highly variable in their composition. Atlantic white cedar (*Chamaecyparis thyoides*) and red maple (*Acer rubrum*) dominate the tree layer, and high bush blueberry (*Vaccinium corymbosum*) and sweet pepperbush (*Clethra alnifolia*) occur in the shrub layer along with silky dogwood (*Cornus amomum*). The herb layer is comprised of species common to very wet, open or enriched sites, including sensitive fern (*Onoclea sensibilis*), royal fern (*Osmunda regalis*), bugleweed (*Lycopus* spp.), marsh fern (*Thelypteris palustris*), and marsh St. John's-wort (*Triadenum virginicum*).
- Associations:** Motzkin (1991) described six AWC associations in Massachusetts. Alluvial AWC swamps are equivalent to his Seasonally flooded type.
- Habitat values for Associated Fauna:** Alluvial AWC swamps can function as vernal pool habitat if water remains standing for 2-3 months and they lack fish; these areas provide important amphibian breeding habitat.

Associated rare plants:

LYCOPUS RUBELLUS	GYPSYWORT	E
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Associated rare animals:

AMBYSTOMA LATERALE	BLUE-SPOTTED SALAMANDER	SC
CLEMMYS GUTTATA	SPOTTED TURTLE	SC
CLEMMYS INSCULPTA	WOOD TURTLE	SC
CRANGONYX ABERRANS	MYSTIC VALLEY AMPHIPOD	SC
HEMIDACTYLUM SCUTATUM	FOUR-TOED SALAMANDER	SC
MITOURA HESSELI	HESSEL'S HAIRSTREAK	SC

Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries & Wildlife

**Examples with
Public Access:**

Known examples on the Canoe, Bungay, and Shingle Island Rivers.

Threats:

The two greatest threats to AWC swamps are land clearing for agricultural, commercial and residential development, and interference of normal hydrological functioning as a result of development. Atlantic white cedar has been cut extensively for posts and shingles for over three centuries. In an extensive statewide vegetation inventory funded by NHESP in 1990, no uncut stands were found, but several sites contained cedars that were 100-200 years old. Selective cutting is detrimental to the persistence of AWC swamps, because hardwoods, such as red maple, out-compete and replace AWC. Any alterations to the natural hydroperiod of AWC swamps threatens their persistence.

Management needs:

Due to the limited distribution of AWC swamps, it is recommended that no clearing or filling of these wetlands be allowed. Atlantic white cedar will regenerate best following catastrophic disturbance events such as hurricanes and fires. Data suggest that in the absence of disturbance, red maple and shrubs increase in abundance at the expense of Atlantic white cedar. Fire suppression negatively threatens the long-term persistence of AWC swamps, and controlled burning practices may be an appropriate restoration tool in many areas. Controlled burning should be accompanied by small-patch clearcuts to be most effective. By clear-cutting small patches, generally 20 m x 20 m, and removing the slash and competing vegetation, pure, even-aged stands of Atlantic white cedar are able to regenerate. AWC swamps require a natural cycle of wet and dry periods for their survival and reproduction. Standing water for much of the year is unfavorable for both seed germination and seedling survival, and young seedlings are killed by both drowning and drought. It is recommended that any alterations in water levels be avoided, this includes development and road construction in uplands surrounding AWC swamps which can alter water levels. Where cedar wetlands are associated with river systems, it is important to maintain normal hydrologic regime of the river.

**Synonyms
USNVC/TNC:**

Chamaecyparis thyoides-Acer rubrum/Vaccinium corymbosum/Triadenum virginicum forest [CEGL006364].

MA [old name]:

SNE Streambottom forest, Atlantic white cedar association [CT2B2A1000].

ME:

Not described.

VT:

Not described.

NH:

Occur in state but are not described separately, included within Atlantic white cedar swamps.

NY:

Part of Coastal plain Atlantic white cedar swamp, Floodplain forest.

CT:

Chamaecyparis thyoides/Vaccinium corymbosum community.

RI:

Part of Atlantic white cedar swamp, Chamaecyparis thyoides-Acer rubrum-Betula alleghaniensis variant.

Golet & Larson, 1974:

Evergreen wooded swamp (WS-2).

Other:

Motzkin 1991. Seasonally flooded type.

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Date:

7/21/99